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July 28, 2023

Mr. Richard Revesz
Administrator
Office of Information and Regulatory Affairs
United States Office of Management and Budget

RE: Joint Industry Group Comments Regarding the Adverse Economic Impact on the Grocery/Food Industry from the U.S. Environmental Protection Agency's Proposed Rule on Restrictions on the Use of Certain Hydrofluorocarbons Under Subsection (i) of the American Innovation and Manufacturing Act of 2020, RIN 2060- AV46

Dear Mr. Revesz:

Hussmann is a global manufacturer and service and install provider for commercial refrigeration equipment. I am submitting this letter as a follow-up to the meeting with the Office of Information and Regulatory Affairs ("OIRA") staff pursuant to Executive Order 12866 held today.

Hussmann has supported the AIM ACT and moving the industry to lower GWP and natural refrigerants as we have invested of over $25M to support this transition. We recognize that one size doesn't fit all and there will be multiple solutions required for the industry.
Since 2010, Hussmann has been working on developing solutions utilizing R290 an A3 natural refrigerant, CO2 and other low GWP refrigerants. We continue to advance CO2 solutions for the market including trans-critical and cascade CO2. While there are variations of CO2 refrigeration systems available to the industry, they are relatively new to US market and the technology to make them as efficient as HFC's continues to evolve. CO2 for refrigeration systems is in short supply with an increasing demand and the total eco system for a CO2 supermarket including systems, cases, controls valves and accessorial equipment is more expensive than traditional HFC systems and cases.

Moreover, CO2 is an inefficient refrigerant in warmer climates but efficient in colder weather climates and cooler months. CO2 runs at extremely high pressures and therefore requires complex controls and electronics to effectively work which continue to be developed for the US Market. When a CO2 system leaks it tends to have a large volume of leak due to the pressure.

There are a few A2L and A1 refrigerants that are below the threshold of 150/300 GWP but they are not currently ready for the market in full production nor has the industry had time to design and test these refrigerants. In addition, the building codes and NFPA do not support the use.

R290 is another natural refrigerant that has been used and is in development for the industry but is challenged due to its flammability and allowable charge size. While there has been some success with R290, however the updated building codes need to be fully adopted NFPA challenges R290 because of its flammability.

It is also important to highlight that every component of the refrigeration eco-system of a store must be redesigned and tested for compliance, safety, energy efficiency and food safety when there is a refrigerant change. The design effort across the refrigeration systems, cases, controls, and components to accomplish

this can't be understated. Specifically, for the new A2L and A1 refrigerants that are below 150/300 GWP; there will be a significant amount of work, time and testing by the manufacturers before they can be implemented and used.

In addition to the limitations set forth above, please consider the following industry pressures:

1. Due to the COVID pandemic, supply chain issues, and an increase in demand for refrigeration, there has been a significant amount of burdens placed on our engineering team to meet the needs of the business delaying development of new alternative solutions.
2. The above stated factors also affected lead times for equipment and components have been stretched from normal lead times of 8 – 12 weeks to 36 – 50 weeks. (While lead times are improving several critical components such as electronics and controllers still have caused extended lead times.)
3. These longer lead times and general construction lead times have stretched the retailers project timelines out significantly as well.
4. Given Hussmann's supplier's own issues, we see our supplier focusing on meeting the demand of the industry and thereby delaying investments in developing the new technologies for transition to new refrigerants for the US Market. Causing a chain reaction slowing down our ability to design and test the complete eco-system.
5. There is a lack of qualified and experienced technicians to service and install the equipment at the pace required for the accelerated timeline. There is a growing shortage of qualified technicians in the industry for both service and installation of equipment. According to the Bureau of Labor Statistics the employment opportunity for HVACR technicians has increased by 15% and continues to rise while attrition in this field is at 8%. In 2020 the need for technicians was at 260,000 with 80,000 unfilled positions, with a net loss of 8%. In 2022 this need grew to 290,000 with 110,000 unfilled positions.
6. In addition to the shortage, today's technicians are not trained on servicing CO2 systems. To date. out of Hussmann's 625 or so service technicians only 23% of them are trained on CO2 systems. A similar sized competitor has only 10% of their technicians trained to date on CO2.

In closing, Hussmann has since its inception been founded on innovation and focused on sustainability. We fully support the transition to lower GWP refrigerants and natural refrigerant solutions; however we acknowledge that based on where the industry is today our retail customers will be significantly challenged and impacted based upon the current proposals and feel that an extension of the timeline will enable a smoother transition for the entire food retail industry.

Very truly yours,

HUSSMANN CORPORATION

Timothy M. Figge, CEO